

Application No. 10/724015

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REMARKS

This amendment supplements the amendment filed on August 28, 2006. Claims 27-54, 56, 60 and 63-102 were pending in this application. Claims 56, 75, 84 and 93 have been amended. No new matter is being added. Accordingly, claims 27-54, 56, 60 and 63-102 are pending in the application with claims 27, 56, 75, 84 and 93 being independent.

Examiner Interview

Applicant wishes to thank the Examiner for a telephone discussion conducted on September 13, 2006. Examiner Hodges and Robert Walat (Attorney for Applicant) participated in the discussion. Applicant discussed amending independent claims 56, 75, 84 and 93 to recite that the "first layer" comprises a semiconductor material to further distinguish certain teachings in U.S. Patent No. 6,777,871 which was cited in an Information Disclosure Statement filed on August 28, 2006. It should be understood that this is not an acknowledgement on behalf of the Applicant that these claims prior to this amendment were not patentable over U.S. Patent No. 6,777,871. Also, the Examiner noted that certain terminal disclaimers filed on August 28, 2006 by the Applicant had apparently not been received by the PTO. Accordingly, Applicant is filing copies of those terminal disclaimers herewith.

Double Patenting

In the Office Action mailed February 28, 2006, a number of nonstatutory obviousness-type patenting rejections were raised. In the response filed August 28, 2006, Applicant filed appropriate terminal disclaimers to address these rejections. Applicant is re-filing copies of the terminal disclaimers in connection with U.S. Patent No. 7,084,434 and U.S. Patent Application Serial No. 10/724,029 because the Patent Office apparently did not receive the original terminal disclaimers filed on August 28, 2006.

Accordingly, Applicant respectfully requests withdrawal of the claim rejections on this ground made in the Office Action mailed February 28, 2006.

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Rejection of Claims Under 35 U.S.C. §103

In the Office Action mailed February 28, 2006, claims 56, 60 and 63 were rejected under 35 U.S.C. §103(a) as being unpatentable over Rastani in view of Krames. The Office Action relies on Rastani to teach most of the features of the claim and asserts that it would have been obvious to modify the Rastani device to include a side dimension of 1 mm and for the extraction efficiency being independent of the edge length as taught by Krames.

In the response filed August 28, 2006, claim 56 was amended to recite that the light emerging from the light emitting device via the surface of the first layer is substantially incoherent. Rastani is directed to lasers which, as known to one of ordinary skill in the art, emit light that is substantially coherent. Therefore, even if one modified the Rastani device in view of Krames as suggested in the Office Action, the modified device would fail to emit light that is substantially incoherent as recited in independent claim 56. Thus, each claim limitation is not taught or suggested by that combination.

Moreover, if the device of Rastani was modified to emit substantially incoherent light, such modification would render it unsuitable for its intended purpose – emission of laser light which is substantially coherent. Therefore, one of ordinary skill in the art would not have been motivated to make such modification (See MPEP §2143.01).

For at least these reasons, independent claim 56 is patentable in view of the combination of Rastani in view of Krames. Claims 63 and 64 depend from claim 56 and are, thus, also patentable.

Accordingly, Applicant respectfully requests withdrawal of the rejections on this ground.

Claims Added in the Response Filed August 28, 2006.

The following claims were added in the response filed August 28, 2006.

Claim 65 depends from independent claim 27 which is patentable over the cited reasons for reasons noted above and, thus, is also patentable.

Claims 66-74 depend from independent claim 56 which is patentable over the cited reasons for reasons noted above and, thus, are also patentable.

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Independent claim 75 includes the recitations of claim 56 prior to the amendment of August 28, 2006 and further recites that the non-periodic pattern comprises holes being devoid of material within a perimeter defined by the first layer. In contrast, the pattern in Rastani is formed of grooves having material within their perimeter. Therefore, even if one modified the Rastani device in view of Krames as suggested in the Office Action, the modified device would fail to include a non-periodic pattern comprising holes being devoid of material within a perimeter defined by the first layer as recited in claim 75. Thus, each claim limitation is not taught or suggested by that combination.

Moreover, one of ordinary skill in the art would not have been motivated to modify the pattern in Rastani to include the holes recited in claim 75. The grooves in Rastani appear to be an important aspect of the device which enables desired light emission. Accordingly, Rastani teaches away from such modification.

For at least these reasons, independent claim 75 is patentable in view of the combination of Rastani in view of Krames. Claims 76-83 depend from claim 75 and are, thus, also patentable.

Independent claim 84 includes the recitations of claim 56 prior to the amendment of August 28, 2006 and further recites that the non-periodic pattern comprises a plurality of non-concentric holes. In contrast, the pattern in Rastani is formed of concentric grooves. Therefore, even if one modified the Rastani device in view of Krames as suggested in the Office Action, the modified device would fail to include a non-periodic pattern comprising a plurality of non-concentric holes as recited in claim 84. Thus, each claim limitation is not taught or suggested by that combination.

Moreover, one of ordinary skill in the art would not have been motivated to modify the pattern in Rastani to include such holes. As noted above, the concentric grooves in Rastani appear to be an important aspect of the device which enables desired light emission. Accordingly, Rastani teaches away from such modification.

For at least these reasons, independent claim 84 is patentable in view of the combination of Rastani in view of Krames. Claims 85-92 depend from claim 84 and are, thus, also patentable.

Independent claim 93 includes the recitations of claim 56 prior to the amendment of August 28, 2006 and further recites that each layer between the light-generating region and the first

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layer is substantially non-reflective. In contrast, the Rastani device includes a reflective layer (e.g., lower mirror 14, FIG. 1) between the light-generating region (active region, 10, FIG. 1) and the "first layer" (substrate 22, FIG. 1). Therefore, even if one modified the Rastani device in view of Krames as suggested in the Office Action, each layer between the light-generating region and the first layer of the modified device would not be substantially non-reflective as recited in claim 93. Thus, each claim limitation is not taught or suggested by that combination.

Moreover, one of ordinary skill in the art would not have been motivated to modify the Rastani device so that each layer between the light-generating region and the first layer of the modified device would be substantially non-reflective. The reflective layer (e.g., lower mirror 14) between the light-generating region and the first layer is important to enabling the Rastani device to function as a laser. Accordingly, Rastani teaches away from such modification.

For at least these reasons, independent claim 93 is patentable in view of the combination of Rastani in view of Krames. Claims 94-102 depend from claim 93 and are, thus, also patentable.

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Respectfully submitted,

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